CPA

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
STEVE BRETSCHNEIDER
DEPUTY DIRECTOR

STRATEGIC INDUSTRIES DIVISION
235 S. Beretania Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Tel.: (808) 587-3812
Fax: (808) 586-2536

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PUBLIC UTILITIES COMMISSION

Ms. Catherine P. Awakuni
Commission Counsel
465 South King Street, Room 103
Honolulu, Hawaii 96813

Dear Ms. Awakuni:

This is in reply to your letter of November 1, 2004, regarding Act 95 Workshops and requesting comments on elements of the Initial Concept Paper describing the Commission's intended methodology for fulfilling the Legislative mandate set forth in Act 95, Session Laws of Hawaii 2004. Our comments are keyed to the paragraphs in the concept paper.

1. Paragraph 21

a. Status and prospects of regulation under RPS in Hawaii and elsewhere.

DBEDT Comments on Paragraph 21, a. DBEDT believes that Act 95 is an excellent basis for regulation under RPS in Hawaii once incentives are developed and it is amended to remove the requirement that the Commission ensure that electric utilities' profit margins do not decrease, but to affirm that the opportunity of electric utilities to earn a reasonable rate of return shall not be diminished as a result of the implementation of the proposed rate design as noted in footnote 5 on page 1 of the Initial Concept Paper.

b. Various alternatives for renewable energy resources in Hawaii.
c. Viability of renewable energy investments.
d. Locational cost of renewable energy in Hawaii.

DBEDT Comments on Paragraph 21, b-d: DBEDT has conducted a number of comprehensive studies that have identified ample viable renewable energy resources available at or below avoided cost by location. These include:

Renewable Energy Assessment and Development Program. DBEDT conducted the *Renewable Energy Assessment and Development Program* (available at http://www.state.hi.us/dbedt/ert/hes3), which was Project 3 of the *Hawaii Energy*

Strategy, in 1995. DBEDT's consultant produced a comprehensive, thorough, and detailed assessment of Hawaii's renewable energy resources, identified some 200 potential renewable energy projects, and developed a recommended long-range strategy.

Analysis of Renewable Portfolio Standard Options for Hawaii, March 2001 (Enclosure 1) The *Update* was used in the *Analysis of Renewable Portfolio Standard (RPS) Options for Hawaii*, completed for DBEDT by GDS Associates (GDS) in March 2001. GDS developed a computer spreadsheet-based cost model to evaluate potential RPS. The model calculated annual costs of producing electricity to meet each utility's annual requirements for twenty years (2001-2020). These annual costs were analyzed for a base case, comprised of existing units and unit additions included in each utility's then current Integrated Resource Plan (IRP), and for four RPS scenarios. The scenarios included 9.5% RPS and 10.5% by 2010 under reference and low oil price forecasts.

As an Appendix to the Analysis, the *Update of Selected Cost and Performance Estimates,* 2000 (Included as part of Enclosure 1) updated the original, highly detailed cost estimates produced for *Hawaii Energy Strategy 1995*, covering the most promising geothermal, hydro, wind, and photovoltaic projects.

Select Hawaii Renewable Energy Project Cost and Performance Estimates, July 2004. (Enclosure 2) DBEDT contracted with Global Energy Concepts (GEC) to update the cost and performance data for selected renewable energy projects with a focus on the renewable energy technologies and representative project locations that appear to be most economic and promising for application in Hawaii in the next 10-15 years. Although other projects using the selected technologies and other technologies are possible, these projects offer near-term opportunities and provide a representative sampling of what could potentially be done in the state. All of the projects described in this report have been updated to reflect current cost and performance expectations for their respective technologies.

We note with some concern that the renewable energy cost and performance data provided by HECO's consultants in the IRP process generally estimate lower performance and higher costs than estimated by our consultant, GEC. We arranged for the two consultants to discuss their estimates with each other, and each modified their results based upon the additional information. However, this only slightly narrowed the differences. HECO has indicated that the range of values will be used in analyzing renewable energy resources in the IRP, but this could still reduce deployment of renewable energy by the utility on a cost basis.

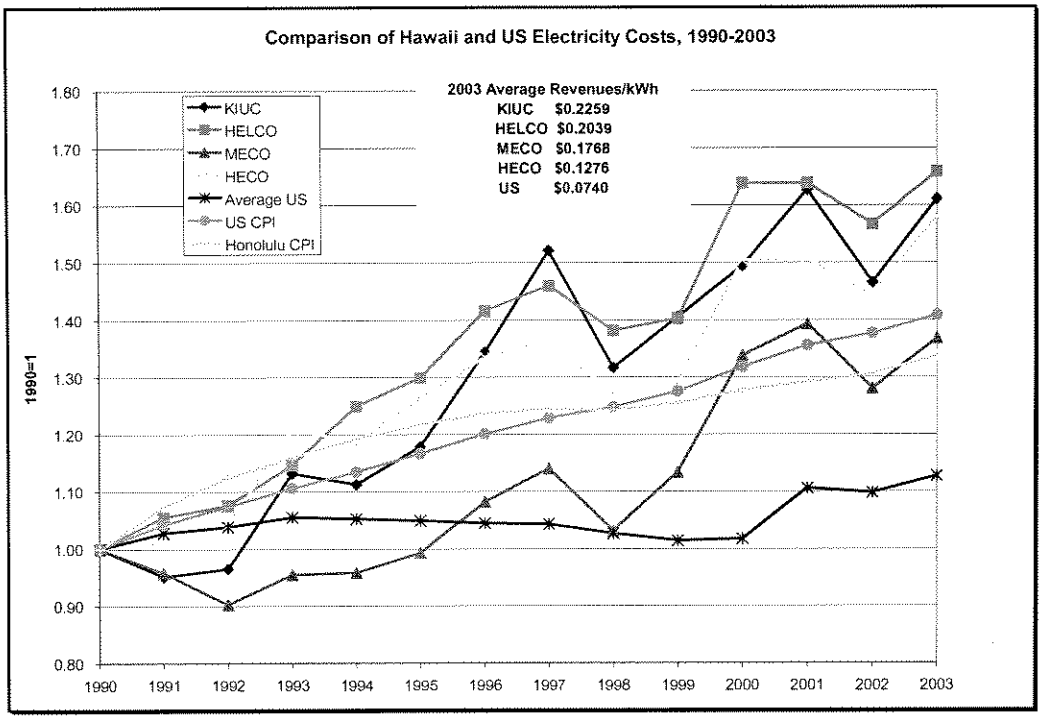
e. Successful RPS schemes and electric utility rate design.

DBEDT Comments on Paragraph 20, e: We note that HECO has demonstrated its support for demand-side management measures which offer incentives to the utility for their successful implementation. In addition, the utility has expressed an interest in providing customer-sited combined heat and power systems as a utility service. We believe that incentives may also encourage HECO to install utility-owned renewable energy in the near term.

2. Paragraph 29

a. The impact of regulation on the behavior of utilities.
b. Status and prospects of regulation under PBR in Hawaii and elsewhere.

DBEDT Comments on Paragraph 29, a-b. As the following chart shows, revenues per kWh have increased more rapidly than the Honolulu Consumer Price Index (CPI) and the US CPI since 1990 and are now the highest average revenues per kWh in the Nation. DBEDT believes that any new regulatory regime should provide incentives to reduce electricity costs and to avoid negative consequences to Hawaii's economy and disposable personal income.



c. Alternative regulatory regimes available.

d. Regulation and power sector restructuring in Hawaii.
e. Successful PBR regimes and electric utility rate design.

DBEDT Comments on Paragraph 29, c-e: On December 30, 1996, the Hawaii Public Utilities Commission (Commission) opened Docket 96-0496, initiating an investigation of electricity competition in Hawaii. From May 1997 to July 1998, parties to the docket met to discuss proposals to restructure and bring more competition to the electric power markets serving Hawaii. At the conclusion of these meetings, the parties filed statements of position with the Commission. Although the Commission recently closed the docket, in late 1999, DBEDT anticipated action on the Docket to be forthcoming and commissioned an **Analysis of HECO's Proposals for Electricity Restructuring** (Enclosure 3) by its consultant, GDS Associates, which focused on HECO's proposals for competitive bidding for new generation; performance based ratemaking (PBR); and innovative pricing provisions. While HECO's positions may have changed, we are providing a copy of this analysis for the Commission's consideration of its discussion of PBR.

GDS concluded: "HECO recently filed its PBR proposal with the Commission (which was not approved). There are a number of significant flaws in this proposal, that serve to effectively shield HECO from any risk and virtually guarantee rewards to the Company based on unjustifiably low performance benchmarks. These flaws further confirm DBEDT's earlier concerns [stated during the competition docket] that HECO's PBR program would only serve to increase costs to consumers. The major flaws in the Company's proposal are:

1. The X-factor is too low, which is likely to lead to excessively high prices;

2. The Z-factor is not well defined, and may lead to unjustified price increases;

3. The deadband of the earnings sharing mechanism in which ratepayers share none of the gains is too wide, which will allow HECO's shareholders to keep all or most of the increased earnings from cost reductions, increased sales, or any other cause;

4. The 50/50 sharing of earnings above the deadband is inappropriate, and will not encourage HECO to achieve the optimal level of cost reduction; and

5. The combination of the deadband and the 50/50 sharing above the deadband constitutes a highly regressive sharing formula, and is exactly the opposite of the ideal sharing formula, which would award most of the inexpensive and easy gains to ratepayers and most of the expensive and difficult gains to shareholders."

We acknowledge that this was an analysis of an earlier HECO PBR proposal and offer this only for reference and to encourage careful review of any such future proposals In addition, we are providing a copy of the National Association of Regulatory Utility Commissioner's *Performance-Based Regulation in a Restructured Electric Industry* as Enclosure 4.

3. Paragraph 40.

No DBEDT Comments on Paragraph 40.

4. Paragraph 46.

No DBEDT Comments on Paragraph 46.

5. Paragraph 53.

No DBEDT Comments on Paragraph 53, a-e.

f. The nature, scope, and duration of penalties, if needed, for future non-compliance with the RPS.

Please see DBEDT comment following 6f, below.

6. Paragraph 58

No DBEDT Comments on Paragraph 58, a-e.

f. The nature, scope, and duration of penalties, if needed, for future non-compliance with the RPS.

DBEDT Comments: As a comment on Paragraphs 53f and 58f, DBEDT provides a table, below, depicting States with RPS Mandates and Penalties for Non-Compliance for the Commission's consideration.

States with RPS Mandates and Penalties for Non-Compliance				
State	Standard	Date	Penalty	Comment on Standard
Maine	30%	2000	License revocation, optional payment into a renewable resource R&D fund, or other monetary penalties	Maine exceeds standard using biomass and hydro
California	20%	2017	5 cents/kWh – maximum $25 million	Increases 1% per year beginning in 2003 to reach at least 20% by end of 2017
Nevada	15%	2013	Commission may impose fine of amount not less than difference between average cost/kWh to acquire renewable energy and average cost/kWh to generate and acquire electricity incurred by utility	5% in 2003, rising to 15% by 2013; 5% of RE from solar
Massachusetts	15%	2020	Alternative Compliance Payment to Renewable Energy Trust at $50/MWh, or 5 cents/kWh	4% by 2009 + 1% per year after 2009
New Mexico	10%	2011	Commission shall set enforcement mechanisms that shall include provisions for administrative fines.	5% in 2006, rising to 10% in 2011
Connecticut	10%	2010	5.5 cents/kWh to Renewable Energy Investment Fund	6.5% by 7/1/2003, rising to 10% by 1/1/2010
New Jersey	6.5%	2012	Suspension or revocation of license; financial penalties, disallowance of recovery in rates	3% in 2001, rising to 6.5% in 2012
Wisconsin	2.2%	2011	Violation of the RPS or misleading certification of renewable resources can result in penalties of up to $500,000	0.5% by 12/31/01, increasing to 2.2% by 12/31/11
Arizona	1.1%	2007	None identified	60% solar electric and 40% other for 2004 through 2012
Texas	400 MW New 2000 MW	2003 2009	Lesser of $50 per MWh (5 cents/kWh or 200% of the average market value of credits for year	400 MW by 2002, increasing to 2,000 by 2009 (and maintained to 2019)
Pennsylvania	Varies by utility		None identified	PECO: 2% in 2001; increasing 0.5% annually; other utilities vary

Thank you for the opportunity to offer these comments.

Sincerely,

Maurice H. Kaya, P.E.
Chief Technology Officer

Enclosures